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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,864	08/23/2001	Goran Lundgren	LAGROTH-023	3544

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EXAMINER

YAO, SAMCHUAN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,864

Applicant(s)

LUNDGREN ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilby (5,284,546) in view of (Tisch (US 5,433,905) or Eriksson et al (US 5,932,156)), Fischer et al (US 5,063,010), and Walsh (US 5,344,484) for reasons of record set forth in a prior office action dated 11-06-03 numbered paragraph 4.

Note: the modified process of Tilby independently injects steam and hot air during a heat-pressing operation.

3. Claims 8-9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference(s) set forth in numbered paragraph 2 as applied to claim 7 or 12 above, and further in view of Admitted Prior Art (APA) for reasons of record set forth in Paper No. 12 numbered paragraph 6.

4. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference(s) set forth in numbered paragraph 2 as applied to claim 7 or 12 above, and further in view of Puumalainen (US 5,815,943), Holik (US 5,387,782), Lehtinen (US 4,932,139) and Westelaken (US 4,424,634) for essentially the same reasons set forth in Paper No. 12 numbered paragraph 7.

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5. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference(s) set forth in numbered paragraph 2 as applied to claim 7 or 12 above, and further in view of Pozzo et al (US 4,009,073), WO 98/50208 A1, and Westelaken (US 4,424,634) for reasons of record set forth in a prior office action dated 11-06-03 numbered paragraph 7.

It would have been obvious in the art to subject a resultant board condition a board by subjecting the board to an air having a predetermined moisture content at a predetermined temperature, because Pozzo et al teaches subjecting a particle board to an in-line humidification operation by exposing the board to humid air (i.e. 95% relative humidity) and at a temperature of around 200 °F to prevent the board from buckling or warping (col. 9 lines 20-41). Moreover, it would have been obvious in the art to perform an in-line humidification using a post-gas treatment similar to the method/apparatus taught by WO '208, where a *"gaseous treatment agent is contacted with at least one wall of the board and is caused to pass through the thickness of the board"* using a vacuum pressure, because WO '208 discloses subjecting at least one wall of a continuously moving board with a gas treatment agent such as a steam and causing the gas to pass through the thickness of the board by forming a vacuum pressure on the opposing wall of the board so as to shorten a post-gas treatment time, and also to recover *"obnoxious emissions such as VOC gases released by the board material and for passing them to further processing."*; wherein the gas treatment agent moisture content and temperature are controlled *"to achieve a desired*

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effect on the material 1 being treated" (abstract; page 1 lines 16-23, lines 32-37; page 2 lines 20-37; page 3 lines 1-37; col. 5 lines 24-37; claims 6-7 and 10).

However, it would have been obvious in the art, motivated by a desire to conserve energy, to re-use a spent (i.e. heated) cooling air captured in a conditioning zone and re-use it as a heating medium in a hot-air heating zone in a belt press, such is conventional in the art. For instance, Westelaken teaches re-cycling heating/cooling air so that, "*air entering the heater section 40 is effectively pre-heated thereby requiring the addition of considerably less thermal energy to raise air to the desired or requisite drying temperature.*" (emphasis added; col. 7 line 55 to col. 8 line 16). Moreover, it would have been obvious in the art to heat (using a heater) a captured spent (i.e. heated) cooling air prior to re-using it as a heating medium in hot-air heating zone in order to increase the temperature of the captured cooling air to a requisite temperature range of 350-450°F in order to cure the resin binder in a mat.

Response to Arguments

6. Applicant's arguments filed on 05-10-04 have been fully considered but they are not persuasive.

With respect to Counsel's argument on pages 4-5 regarding the Fischer et al patent, such is moot in view that, the rejection of claims over the Fischer et al patent is withdrawn.

With respect to Counsel's statement on page 5 last four lines regarding generated and emitted gases, Counsel's attention to Applicant's own

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specification on page 1 numbered paragraph 0003. In the cited paragraph, Applicant discloses a well known problem of a prior art heat-pressing operation. Accordingly, various gases including steam and VOC are intrinsically generated and emitted during the heat-pressing operation.

With respect to Counsel's statement on page 6 full paragraph 1, Examiner strongly disagrees with Counsel's assertion that none of the references teaches applying a *"hot air as a separate step"* from an injected preheating steam.

Counsel's attention is directed to a rejection set forth in numbered paragraph 4. As set forth in the rejection, it would have been obvious in the art to modify the process taught by Tilby, by subjecting a fibrous mat to a steam preheating operation, before it is subjected to a hot-air curing during a pressing operation, because it is a common practice in the art to subject a fibrous mat to a steam preheating operation, before it is subjected heat-curing during a pressing operation as exemplified in the teachings of either Tisch or Eriksson. As for Counsel's argument that there is no reference, which discloses supplying hot air to prevent condensation of gaseous materials. Simply because none of the references explicitly discloses supplying hot air to prevent condensation of gaseous materials, it does not necessarily mean that, a heated-air operating at a temperature range of 177-232 °C in a modified process of Tilby does not prevent condensation of various gaseous materials. If an operating temperature of a hot air in claim 10 (which reads on a temperature of (for example) 101 °C) is capable of preventing various gaseous materials from condensing, why wouldn't a

heated-air operating at a temperature range of 177-232 °C be able to prevent various gaseous materials from condensing?

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
07-13-04